State of Arizona
Department of Administration

Business Continuity Planning Guidelines
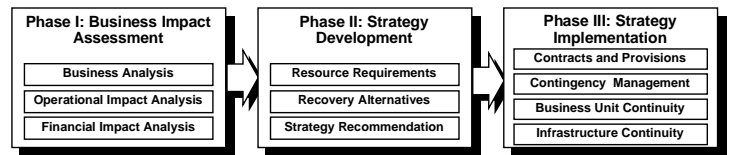
Phase I: Business Impact Assessment	Phase II: Strategy Development	Phase III: Strategy Implementation
		Contracts and Provisions
Business Analysis	**Resource Requirements**	**Contingency Management**
Operational Impact Analysis	**Recovery Alternatives**	**Business Unit Continuity**
Financial Impact Analysis	**Strategy Recommendation**	**Infrastructure Continuity**

Information Services Division
Security Services

02/11/00

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Introduction

This document describes a methodology to assist ADOA Divisions in developing a comprehensive Business Continuity Program that will ensure the continuation of core processes with the occurrence of unforeseen circumstances.

The purpose of this document is to assist ADOA Divisions in meeting the basic set of requirements that are required and necessary for protecting State assets

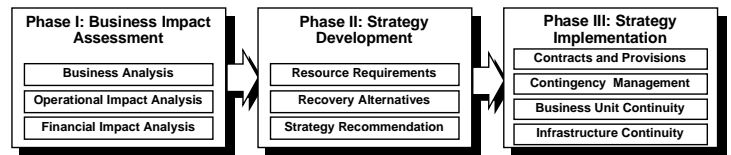This document is organized as follows:

- A *Background* on the standards and policies that describe the urgency of continuity planning.

- The *Scope*.

- *Phase I - Guidelines for conducting a Business Impact Assessment (BIA)* - the process for determining the acceptable level of impact to ADOA by core business process and function. This methodology is heavily weighted on the impact to customers resulting from the loss of ADOA core processes and functions.

- *Phase II - Guidelines for Strategy Development* - the process for identifying detailed resource requirements, developing alternatives for recovery, and selecting a cost-effective strategy based on the *Business Impact Assessment* conducted in Phase I.

- *Phase III - Guidelines for Strategy Implementation* - the process for implementing the strategy that was selected during the *Strategy Development Phase*.

- *Glossary* - A collection of common terminology and definitions of "best practices", current to both private and public sectors.

Prior to implementing any strategy for business continuity, the basic requirements should be defined based on the needs of the core processes and services provided to our customers. Information technology is an indispensable tool that supports a ADOA in performing day to day core processes. However, it is important to bear in mind that the criticality of information technology is only due to its support of the *core processes* that actually implement the ADOAs programs and serve our customers.

There is a variety of computer software can be helpful in the development and documentation of a Business Continuity Program. Depending on the size and nature of the organization, the continuity plan documentation tool may simply be word processing and spreadsheet software. In smaller organizations, the minimal requirements may be sufficient. A division business continuity planner

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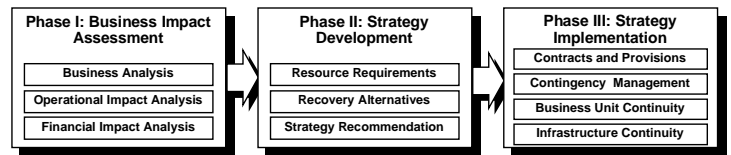| Phase I: Business Impact Assessment	Phase II: Strategy Development	Phase III: Strategy Implementation
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should consider the selection of a documentation tool early in the project, since most of the specialized tools permit input of information, which will be gathered in the first and second phases of work. On request, the Information Services Division will provide consultation to any division in meeting business continuity project requirements.

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Background

For most divisions, services to their customers and/or the public would effectively cease if the core processes supported by key support systems were inaccessible for an unacceptable period of time. In some cases, the failure or inaccessibility of a critical core business process may immediately jeopardize public health and safety. Each division should establish risk management and disaster recovery planning processes for identifying, assessing, and responding to the risks associated with loss of ability to execute its core processes. To adequately address the division's requirements for recovery, plans for such recovery should be developed as a part of an agency-wide Business Continuity Program.

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<u>Scope</u>

This document is intended to provide guidance and assistance for all ADOA divisions in the development, implementation and maintenance of a business continuity program.

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Phase I - Business Impact Assessment

Definition

The *Business Impact Assessment (BIA)* identifies the operational (qualitative) and financial (quantitative) impact of an inoperable or inaccessible core process on a division's ability to conduct its critical business processes. The *BIA* provides the basis for formulating the ADOA's business continuity strategy, which is accomplished in Phase II. This assessment guides the selection of recovery strategies that may be employed to restore operations within the required time frames. An agency-wide operational impact assessment is required to develop and implement an appropriate business continuity program and determine the effects on the public caused by a loss of ability to continue core business processes.

Information regarding the effect of an outage is collected through interviews with the managers of core processes. This information is analyzed and a business analysis, operational impact analysis, and financial impact analysis (where appropriate) are developed for each core process.

- The **Business Analysis** identifies and describes critical core processes, and the high-level resources which support these functions. It also describes the public and customers served by these functions. This analysis enables us to confirm the managers' description of their operations and highlight functional inter-dependencies and single points of failure.

- The **Operational Impact Analysis** identifies the organizational implications associated with the loss of access, loss of utility, or loss of facility. It highlights which functions may be interrupted by an outage, and the consequences to the public and customers of such interruptions.

- The **Financial Impact Analysis** identifies the economic losses that could result from an outage. A Financial Impact Analysis is optional in some cases, and normally provides only "order of magnitude" accuracy. However, the results of this analysis may provide cost-justification for implementation and maintenance of the specific recovery strategies.

It is important to note that a core process's criticality can be measured in many ways; financial impact of an outage is only one factor. If an outage of a given function would have a significant negative impact on the health and safety of the public or State workers; on the legal integrity of State operations; on the continuation of essential ADOA programs; or on the fiscal integrity of State operations, then the function's criticality is probably high. Each division should determine and document the consequences on their customers for each core process.

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Any high-level information on resource requirements that is gathered during the interview process will be used later in the Strategy Development and Strategy Implementation phases.

Objectives

Identify the core processes performed by the division, and understand the flow of information, materials, and services through these core processes. Describe organizational dependencies and resource reliances.

Describe the operational and financial impacts of an outage to the division and each function. This includes a detailed description of the effects on all customers served by each core process.

For each core process, define the *Maximum Acceptable Outage (MAO)*; the point at which resource and functional support should be restored. The MAO will be based on the combined results of the Operational and Financial Impact Analyses. Using the preliminary MAO's established in the *Operational Impact Analysis*, describe the financial impact for an outage of the duration suggested by each function's assigned MAO. Policy makers should then decide whether that level of financial impact is acceptable or if the MAO should be adjusted to reflect different recovery timeframes than the MAO, which was originally assigned to the function.

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Business Analysis

Purpose

The *Business Process Analysis* identifies and describes the core processes performed by the division, as well as the core processes and high-level resources, which support these core processes. It will also describe the customers served by each function. This analysis will help confirm the ADOA management's description of their operations and highlight functional interdependencies and single points of failure.

Objectives

Identify core processes within each division.

Understand and describe the high-level flows of information, goods, and services through these core processes.

Understand and document the customers served by each core process.

Gain confirmation of a "shared understanding" of the division to ensure that the remaining analyses are appropriately focused.

Approach

The high-level approach to the Business Analysis consists of gathering information about core processes, documenting business flows, identifying customers, and gaining confirmation of the information before moving on to the *Operational Impact Analysis*.

Most divisions are structured along functional boundaries (e.g.: Accounting, Information Technology, etc.) and the core processes within those units (e.g.: Payroll, Accounting, etc.). In reality, however, a division's business is conducted through one or more business processes. A business process describes a set of recurring activities - a flow of information and/or materials - that produce something of value for a customer. A process may cut across multiple divisions, and usually contains several functions. These processes are not always readily apparent. It is more straightforward to analyze the ADOA in terms of the core processes performed. Each division may perform one or more core processes; it is critical to understand the relationships between those core processes and the end customer in order to analyze the impact of an interruption of a given function. The specific approach to understanding these core processes and business flows is:

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- Review relevant documentation (e.g., critical success factors, strategic plans, budgets, performance measurements, IT Plans, Y2K documentation, PIJs, division goals, organizational charts, etc.) to build an understanding of organizational purpose and structure.

- Conduct interviews with the Leadership Committee and the Business Continuity Steering Committee to collect information on their "first-hand" perspectives on how the ADOA operates. It is important to note that these interviews will serve as data-gathering opportunities for all three steps of the *BIA*. In other words, a manager should be interviewed only once; in this interview, all information should be gathered for the Business Analysis, the Operational Impact Analysis, and the Financial Impact Analysis.

- Compile the results of your interviews in the form of business flows. These flows should describe each core process and the flow of information, services, or goods into and out of the process to include the customer.

- Develop descriptions of support functions. Some functions within the ADOA may perform important roles, which contribute indirectly to the agency's ability to implement its assigned programs. These can be classified as support functions. For example, every division should have a facility in which to operate, but it would be difficult to describe the specific ways, which the General Services Division contributes directly to business operations. As a result, it may not be possible to develop business flows for such functions. Instead, they should simply be identified and described; this information will be important when the recovery plans are being documented and implemented.

- Develop a matrix (or another document) which describes the relationship of the core processes identified to the organizational structure of the division.

- Confirm understanding of the division, its core processes, and its business flows with appropriate management through review of the descriptions of the core processes performed. Much of this confirmation may be accomplished iteratively, as the materials are developed.

Data Collection

The following information sources should be considered in the business analysis:

Information regarding core processes performed, the inputs and outputs of those core processes, and the customers of these outputs gathered through interviews with process managers.

Documentation regarding the division's objectives (programs implemented), core processes performed, organizational structure, and the flow of information, goods, and services through the ADOA to the end customer.

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Resources

To conduct the Business Analysis, you will rely primarily on the availability of process managers for participation in interviews and validation meetings. These managers should be at a level from which they oversee one or more core processes - not simply activities or tasks. The level and title of these managers will vary from division to division. It is most helpful to begin by considering management positions, which are two or three levels up from the task level of the division (for example, the manager of the supervisor of task workers, or his/her direct superior). Consider both the *type of information*, which could be gathered from these managers and the *number of interviews necessary* to gather that information. Depending on the situation, it may be appropriate to interview individuals who are one or more levels above this first group of managers.

Decision Points

As the documentation of the core processes performed by each division is completed, they should be reviewed and confirmed with appropriate management. Any necessary corrections should be made to ensure that the final deliverables represent a shared understanding of how the division accomplishes its goals and delivers its services/products to the customer.

Deliverables

A matrix or other document, which relates the core processes, performed to the organizational structure of the agency.

A depiction of the business flows for all non-support core processes. These depictions may be pictorial or descriptive, and they should highlight:

- The impact on the public

- Relationships between core processes, support functions, and business units

- Single points of reliance

- Support service reliances

- Interdependency/interactivity of core processes

A description of all support functions and their relationship to the agency's operations.

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Considerations

The kickoff meeting should include the Leadership Committee and the Steering Committee; it may also be useful to include the interviewees in this meeting. Describe the project's goals and its importance to the ongoing continuity of the ADOA. Answer any questions and clearly define the roles and responsibilities of each participant.

Note: it is possible to save time by using part of this meeting to schedule interviews.

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Operational Impact Analysis

Purpose

To identify the organizational implications associated with the loss of utility, loss of access, or loss of facility. It highlights which core processes may be interrupted by an outage, and the consequences of such interruptions. This analysis guides the selection of recovery alternatives through the identification of critical elements of each business function.

Objective

Identify and document the outage implications per outage scenario for each business function.

Understand and document the relationships between core processes: resource reliances and organizational dependencies.

Understand and document the impact on the public for each outage scenario.

Approach

The approach to performing an *Operational Impact Analysis* generally consists of the following steps:

- Gather Information

    Customize interview sample questions

    Identify the outage implications on state organizations and the public for all core processes by outage scenario

- Analyze information gathered for all core processes

    Determine Maximum Acceptable Outage (MAO) for each business function

    Identify organizational dependencies for each business function

    Identify resource reliances for each business function

- Present information gathered for all core processes

    Document outage implications on state organizations and the public per outage scenario

    List organizational dependencies

    List resource reliances

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Gather information by interviewing personnel within each division to gain an understanding of the outage implications on state organizations and the public per outage scenario for each business function. Three basic outage scenarios are Loss of Utility, Loss of Access, and Loss of Facility.

It is helpful to frame the discussion in terms of outage timeframes, which are appropriate for the agency. Identify 3 or 4 timeframes, which will provide a sense of time perspective to the managers who, will be interviewed. (For example: ask about the impact of an outage to a core processover 1 day, 3 days, 1 week, and 2 week timeframes. Be sure to adjust these timeframes appropriately for the nature of the agency's responsibilities.)

Offering the interviewee examples of how a business function's criticality can be measured can provide additional perspective. If an outage of a given function would have a significant negative impact on the health and safety of the public or State workers; on the legal integrity of State operations; on the continuation of essential ADOAprograms; or on the fiscal integrity of State operations, then the function's criticality is probably high. The higher the criticality of a function, the shorter is its MAO.

Document all information obtained during interviews as interview notes.

Extract information from the interview notes and business flow diagrams (developed in the Business Analysis) to describe the qualitative operational implications on state organizations and the public per outage scenario, the organizational dependencies and resource reliances for each business function. A table is often an effective way to illustrate the business function's organizational dependencies, resource reliances and the relationship between outage scenarios and operational impacts. In many cases this will identify needs for manual core processinteraction and relocation proximity requirements necessary to replace automated interaction while system (or other resource) restoration is in process. The ability to examine operational information by core processis helpful in determining the MAO for each business function.

Analyze the operational information for each core processto determine its MAO timeframe. These timeframes provide the basis for developing the recovery strategies in Phase II of the Business Continuity Planning Standards.

After the MAO has been set for each business function, this information should be presented in such a way that this information will be helpful in defining resource requirements to recover each critical business function. A matrix format is often an effective way to depict the relationship between the core processand the MAO timeframe. Spreadsheet programs or word processing tables can be useful tools for documenting this relationship.

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Data Collection

Type of Data & Methods:

Information regarding the operational implications associated with the Loss of Utility, Loss of Access, and Loss of Facility outage scenarios for each core processis gathered through interviews with management.

Information regarding the business function's resource reliances is gathered through reviewing the business flow diagrams and interviews with management.

Information regarding the business function's organizational dependencies is gathered through reviewing the business flow diagrams and interviews with management.

Resources

People: Executive staff and division managers.

Software Notes: The ability to sort by MAO will be helpful in developing recovery strategies.

Decision Points

Validate information gathered before performing the Financial Impact Analysis and/or Defining Resource Requirements.

Deliverables

A core processsummary "table" describing the outage implications for each core processby outage scenario with a listing of resource reliances and operational dependencies for all core processes.

A detailed description, by business function, of the outage implications for each customer category. [E.g. Agencies, vendors, food-stamp recipients, state employees, highway users, prison inmates, etc.]

A listing of core processes by MAO timeframe.

Considerations

Consider the following when determining the operational implications of an outage on a business function:
- Seasonality and cycles of process volume

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- Impact tolerance over time
- Impact and tolerance of public, legislature, public, vendors, regulating agencies, business partners, etc.
- Information loss
- Single points of failure
- Legal liability

Consider the following when determining the business function's MAO:
- Impact of organization dependencies

    For example, if function "A" is dependent on function "B" and function "A" has a shorter MAO than that of "B", then the minimum recovery requirement for "B" becomes the same as that for "A".

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Financial Impact Analysis

Purpose

To identify at a high level the potential economic implications on the ADOA associated with an outage. If it is possible to calculate this, it should include any additional expenses or losses that the ADOA may incur in the event of an outage. For many organizations, this impact cannot be reasonably approximated.

Objective

Identify and quantify the economic implications associated with an outage.

Help provide cost-justification for the selection of recovery alternatives. Recovery alternatives are selected in Phase II, Strategy Development.

Approach

- Determine if a financial impact analysis needs to be performed for the agency.

- Gather Information

    Customize interview sample questions.

    Identify the economic implications of an outage on the business function.

    Obtain assistance from division to quantify financial impacts.

- Analyze information gathered

    Describe the economic implications of an outage for each core processthat identified a financial impact during the interview.

    Quantify (estimate) the economic implications of an outage for each business function. Not all economic implications can be quantified.

- Present information gathered

    Define the types of financial impacts identified, even if an amount can not be estimated.

    Graphically represent the financial impacts identified and quantified.

First discuss with the project liaison and executive steering committee if the ADOA will need to perform a financial impact analysis to provide cost justification for the selection of recovery alternatives.

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Gather information by interviewing personnel within each division to gain an understanding of the economic implications associated with an outage on the core processes. Ask for assistance to quantify the financial impact. If the financial impact can not be quantified at least obtain a description of the economic implication and why it can not be quantified. Document information obtained during interviews as interview notes.

Extract information from the interviews to identify which core processes may have financial impacts associated with an outage. Calculate and describe the financial impacts over outage timeframes and at the MAO timeframe determined by the *Operational Impact Analysis*. If the financial impact can not be quantified at least provide a description of the implication and state why an estimate can not be quantified.

After the estimates have been calculated, this information should be presented in such a way that the information would be helpful in selecting recovery alternatives. A graphical representation of the data is often an effective way to depict the relationship between the outage timeframe and the quantified impact. Spreadsheet programs can be a useful tool for documenting this relationship.

Data Collection

Type of Data & Methods:

Information regarding if an economic implication is associated with an outage for a core processis gathered through interviews with management.

Obtain information and/or assistance from the business units, budgetary personnel, or internal audits staff to quantify the financial impacts.

Resources

People: Executive staff, division managers, division personnel, budgetary personnel, and/or internal audits staff.

Software Notes: Spreadsheet software should be used to quantify the financial impacts. The ability to graphically represent the quantified financial impacts is helpful to see the relationship between the magnitude of the quantified impact and the outage timeframes.

Decision Points

Upon completion of the impact estimates, the appropriate management should review and confirm the information. Any necessary corrections should be made to ensure that the final deliverables represent a shared understanding of how the division accomplishes its goals.

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What is an acceptable "threshold of pain" relative to the financial impacts of an outage? In other words, at what point following an outage is recovery of a given function *financially* required to avoid unacceptable financial impacts to the agency? Once this decision is made, the division can better make an informed, cost-justified selection of a recovery strategy.

Deliverables

Quantified financial impacts by business function.

Considerations

In some cases, the impact of a disaster is not clear-cut. This is especially true in larger, more complex agencies. The financial impact analysis will provide some of the information necessary to identify recovery priorities.

Consider the following types of financial impacts:

- *Additional Expenses*:

    Eliminate the backlog resulting from an outage. This calculation should focus on the resources necessary to eliminate the backlog or unfinished work that accumulated and as a result have lost productivity during an outage. Key factors: Would work accumulate as a result of lost productivity during an outage? If so, would it need to be eliminated for production levels to return to normal after an outage?

    Implement alternate procedures during an outage. For this calculation focus on the resources necessary to continue an activity of the business function. Key factor: Is it essential for the core processto provide continuous availability of this activity? If so, would the alternate procedures require additional resources?

    Fines and/or Penalties. Typically fines and/or penalties are due to the non-fulfillment of stipulations. Key Factors: Would the non-fulfillment of the business function's obligations, duties, activities harm, injure, or create a hardship or a loss on a third party? If so, a fine and/or penalty may be imposed to compensate the disadvantaged party.

    Late charges. Typically late charges are associated with the inability to pay business obligations such as invoices or contracts. Key Factors: Core processes that attribute or are responsible to third parties may have stipulations that result in a charge.

- *Losses*:

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Loss of interest, due to a delay in bank deposits. Key Factors: Generally banks pay interest over the weekend even though there may not be deposits. Also, this type of loss accumulates over the outage timeframes, it is not just a lump sum.

Loss of discounts, due to inability to take advantage of discounts. Key Factors: Does the ADOA typically take advantage of discounts, if so, estimate an average of what could be lost over the outage timeframes.

Lost revenues or fees not expected to be recouped. Key Factors: Generally lost revenues or fees are lost if the item or items were destroyed as the result of the outage.

Consider the magnitude of:

- Backlog recovery
- Temporary employees
- Loss of productivity
- Legal liability
- Impact of seasonality
- Other Additional expenses incurred at time of outage
- Property/fixed asset loss not covered by insurance

Other considerations:

- Comparability of graphical information. Using a uniform scale for the financial impact model provides quick comparability amongst graphs.
- Using a consistent format for each graphical representation allows the reader to more easily understand and compare the financial data.
- The amount of financial information provided with each calculation should be sufficient enough to allow the reader to come to the same conclusion. Thus it is important to list all assumptions even the most obvious.
- Business days compared to calendar days.

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Strategy Development

Definition

Continuity strategy development is the process of determining the high-level approach, which the agency, board or commission will use to address its Business Continuity Planning needs. The *Strategy Development* phase builds upon the MAO's identified for each core processin the *BIA* by defining the specific resources necessary for the performance of that function, and setting a recommended strategy for the recovery of those resources in an outage. This phase is a critical decision-making step in the development of a Business Continuity Program, because this analysis provides the specific guidelines by which the program will be implemented.
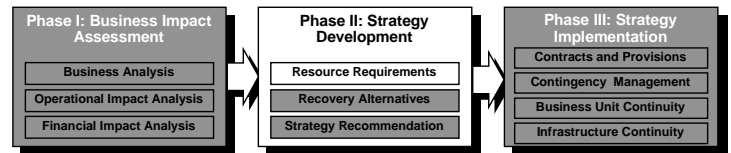
Strategy Development is accomplished through 3 steps:

- *Define Resource Requirements*: Identify, through interaction with division managers, the specific resources which are required for full and degraded operation of the core processes which are performed by their units. Organize these resources into logical categories with similar recovery needs.

- *Develop Recovery Alternatives*: For each category, describe the alternatives for recovery. Note any factors, which may be useful for the comparison of the alternatives.

- *Recommend Recovery Strategy*: From each set of alternatives, select the approach which will most effectively meet the agency's continuity and budget requirements, and present the consolidated recommended strategy to management for approval.

Objectives

The objectives of this phase are to identify alternatives for specific continuity requirements, evaluate those alternatives, and recommend a business continuity strategy for management's approval.

Much of the information gathered during this phase will be used in developing Feasibility Study Reports and RFP's required for strategy implementation.

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Define Resource Requirements

Purpose

To develop and recommend an effective recovery strategy, it is necessary to understand what core processes need in order to perform their task(s). The goal of resource requirements definition is to determine which resources support critical core processes and when they become necessary for recovery.

Objective

Document an understanding those specific resources (people, equipment, data, office space, communications, internal/external suppliers, etc.) that support the core processes that were deemed critical during the *BIA*. In addition to understanding what resources must be recovered, recovery time requirements should be determined based on MAO's for the related business function.
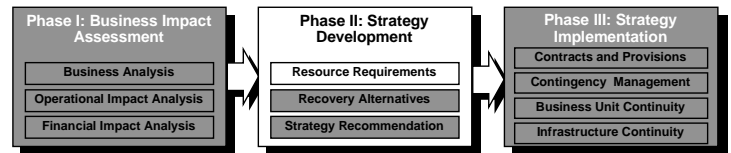
Approach

The approach to defining resource requirements generally takes three broad steps:

- Information gathering

- Analysis and consolidation of information gathered

- Presentation of resource information including recovery timeframes

Gather information through the collection of reports (i.e. equipment inventory, network diagrams, contracts, etc.), and interviewing of personnel to fully understand what resources are needed for their core processto perform its task(s). Wherever possible obtain replacement costs for each resource item.

After information has been gathered, logically organize it into resource categories. Possible resource categories may include, but are not limited to; information systems, telecommunication, people, vital records, office equipment, suppliers, office space, etc. These categories are determined by the organizational structure the recovery plan is being developed for. Categories should be established based on recovery needs, not pre-determined categories.

Using information determined in the *BIA* and interview process, determine recovery timeframes for each resource.

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After resource requirements have been categorized and recovery timeframes have been established, this information should be presented in such a way that this information would be useful in developing a strategy to recover each critical business function. A matrix format is often an effective way to depict the relationship between resource and recovery timeframe. Spreadsheet programs can be a useful tool for documenting this relationship.

Data Collection

Methods:

The majority of data will be collected through interviews with management. This data will either be communicated verbally or presented in report form (paper or electronic). The interview process to be used here is similar to that discussed earlier in this document.
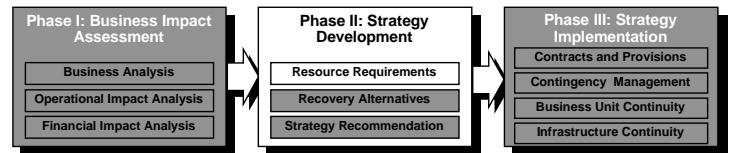
Types of Data:

All resources that support the core processes that were deemed critical in the *BIA*. The following are examples of inventory lists that could be developed:

- People
- Office equipment
- Office space
- Computer hardware
- Computer software
- Data/Vital Records (all media types)
- Special equipment
- Forms and supplies
- Voice and fax communications equipment and facilities
- Data Communications equipment and facilities (LAN, WAN and other)
- Computer applications
- External services and resources (vendors and utilities)
- Internal services and resources

Resources

People: Department managers

Software Notes: The ability to sort data by category will be helpful in developing recovery alternatives.

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Decision Points

Validate information gathered before developing Recovery Alternatives.

Deliverable

A resource requirements matrix showing what resources are needed within what time frames and their associated costs.

Considerations

- Resource information may be partially gathered during the *BIA* process. This information should be reviewed as a starting point.

- The use of data collection forms and checklists with appropriate categories should be considered to facilitate the collection process and ensure that all categories are considered.

- Resource sharing should be considered when possible (e.g. copy machines, facsimile machines)

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Develop Recovery Alternatives

Purpose

To identify alternatives for the recovery of resources that support critical core processes.

Objective

Identify recovery alternatives that will achieve the recovery resource requirements, develop costs associated with each alternative and gather other information that may be required to evaluate the alternatives.

Approach

Based on the information gathered in the resource requirements definition, alternatives should be selected for each resource category that will meet the MAO's established in the *BIA*. In addition to cost, advantages and disadvantages must be identified for each alternative. These alternatives may include contracted services from an outside vendor, internal operational changes, or reciprocal arrangements with other departments or organizations.

Where appropriate, it may be necessary to develop vendor requests for proposals (RFP's) for alternate facilities and/or services. These RFP's are submitted to the vendors in a form that will allow for standardized categorization of responses. Recovery alternatives (including proposal responses received) are analyzed in relation to predetermined criteria and a documented summary of the analysis is developed. The basis for the identification of recovery alternatives is to be able to select a strategy that best fits the needs of the organization. The agreed upon strategy will most likely be a combination of recovery alternatives for each type of resource group identified.

When you have completed defining the Recovery Alternatives you will have as a deliverable an analysis of recovery alternatives for each resource category. For each alternative there must be information on cost (described below), recovery timeframe, and advantages & disadvantages. This information should be as complete as possible so that each alternative can be compared side by side to determine the best alternative.

Alternative costs can be broken down into three categories; implementation, maintenance, and activation.

- *Implementation* costs are those up front costs needed to establish the recovery alternative. These costs may include, but are not limited to; hardware/equipment purchase, initial vendor contract fees, service establishment fees, etc.

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- *Maintenance* costs are those ongoing monthly or annual costs to keep the plan active. These costs may include, but are not limited to; vendor maintenance fees, software upgrades, telecommunication fees, additional hardware/equipment purchases, salary, etc.

- *Activation* costs are those costs that are realized only in the event of an outage. These may include declaration fees, hardware/equipment purchases, usage fees at vendor site, etc.

Data Collection

Types of data that may need to be collected include:

- <u>*Recovery options*</u> - for each identified category define realistic recovery options that meet the stated MAO's determined in the *BIA*. During this phase, do not rely solely on your expertise. Seek the assistance of specialists, vendors, other departments, etc.

- <u>*Cost estimates from service providers*</u> (Make sure when requesting cost estimates from different vendors to provide each vendor with the same list of requirements so that the cost estimates you receive can be realistically compared.)

- <u>*Recovery time estimates*</u> - for each category of resource you should look for alternatives that meet the desired MAO. In addition, it is often helpful to look at alternatives that provide recovery in other timeframes for use as a comparison. These alternatives may show that recovery can be done in a lot less time for very little cost, or on the other hand, it may make more sense to extend the recovery time slightly to realize significant cost reductions. *Keep in mind recovery strategies are always based on the delicate balance of cost versus recoverability.*

Resources

People: vendors, specialists, consultants, co-workers, department managers, etc.

Other: Internet, trade publications, conferences, etc.

Decision Points

Before moving on to the Recommend Recovery Strategy step, confirm that you have presented a comprehensive list of alternatives for each category in a similar format. (For comparison reasons)
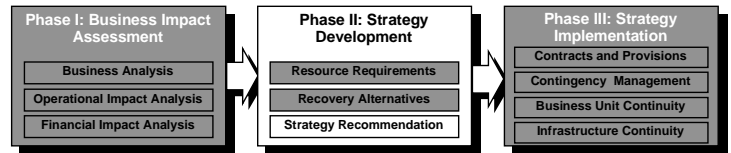
Deliverables

Analysis of Recovery Alternatives (organized by category of resource)

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Considerations

In developing alternatives the following should be considered:

- Alternate procedures

- Ability to process manually

- Suspending the function for some period of time

- Mitigation of insurance

- Outsourcing and vendor services for hot/warm processing site, temporary personnel agencies, cellular phone rental, etc.

- Process re-design

- Single points of failure

- Ability to re-create information

- Back-up vs. replication

- Business cycles

- Linkage with other alternatives

- Work schedule modification to maximize resource use

- Internal resource capability

- The option to "do nothing"

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Recommend Recovery Strategy

Purpose

To identify the best alternative(s) for each resource/service and integrate them into a single, recommended, recovery strategy.

Objective

To select the most appropriate recovery strategy to recover those resources deemed critical in the *BIA*. The recommended strategy will be a combination of selected alternatives from each previously identified category. The goal is to have a comprehensive strategy that can be implemented after gaining management approval.

Approach

The development of an operational recovery strategy is done by selecting the best alternative within each previously identified category and incorporating these recommended alternatives into a cohesive plan that provides for degraded recovery of critical resources in the event of an outage.

The development of this recommended strategy is done in three steps:

1. *Select best alternative for each category of resource* - For each category of resource identified, select the best alternative based on recovery timeframe (relative to stated MAO), cost (implementation, maintenance, & activation), and organization fit. When selecting a strategy take into account any future organizational changes that may affect the alternative. Also take into account the relative vendor reliance your organization may have if choosing the selected option. Will you have the ability to change recovery alternative if your business changes?

2. *Ensure that the selection of alternatives compliment the selected alternatives from other resource categories* - When combining selected alternatives into a single recommended strategy pay special attention to make sure that the alternatives you have selected will work together. For example, if you decide to recover computer equipment at a service provider you must also make sure that a plan is in place to get your data to that remote location, as well as arrange for communication (voice/data) connectivity.

3. *Document the recovery strategy into a single recommendation* - Once you have decided on the components of the recommended strategy, the pieces need to be brought together into a single document to be presented to executive management for approval. As a suggested format, this document should include the following sections:

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- A brief management summary (describing the recommended strategy)

- Description of resource categories

- Description of the *selected* alternatives (including recovery timeframes, costs, advantages & disadvantages)

- Comprehensive list of alternatives (organized by resource category)

- Detailed cost breakdowns (for each alternative)

- Appendix:

  - Resource Requirements Matrix (inventory of all resources)

  - Vendor contact names & numbers

  - List of people interviewed during project

  - etc.

Data Collection

Data needed in this section is drawn from the alternatives developed in the previous section. Typically there is no additional data that must be collected to develop a recommended strategy.

Resources
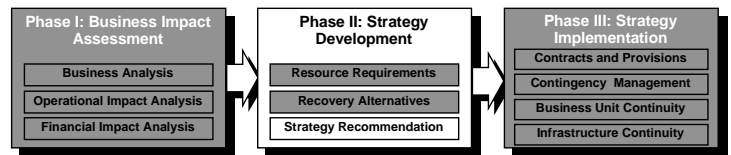
People: Division Managers, Executive Management

Decision Points

After completion of this section management must review and approve the recommendation before the plan can be implemented. At this stage management may choose to:

- Accept and fund the strategy as presented

- Ask for modification(s) to the strategy

- Re-visit the MAO's that were determined in the *BIA*. (*If the MAO's were relatively short it may be costly to recover certain resources. If this is the case, management often seeks further justification for the short MAO's*.)

Deliverables

A recommended organizational recovery strategy

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Considerations

- In developing a recovery strategy, consider the impact of single points of failure. Single points of failure will increase risk if introduced (or left in) during strategy development.

- In evaluating the combination of alternatives, be sure to consider complexity and logistics

- Selected alternatives should be complementary, cost-effective and have the ability to work in conjunction with each other.

- Discuss potential alternatives with management early in the process.

- External solutions should take into account the affect on a vendor in a regional outage. What guarantees can the service provider make?

- Internal solutions must take into account those "hidden cost" associated with maintenance and use.

- The recovery strategy selected should be designed as an on-going program, not a project with a completion date. It should take into account organization change and growth over time. Revisions to the plan should be built into the program.

- The selected strategy should be a good fit for the organization. In order for the plan to be truly effective, there should be complete buy-in from executive management.

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Strategy Implementation

Definition

This phase consists primarily of the mechanics around documenting and implementing the agency, board or commission's Business Continuity Program. Recovery contracts and provisions must be negotiated and formalized, and the plans and procedures for the recovery of the agency's programs must be documented. The recovery plans are a compilation of several distinct sections. Each division must develop its own operational recovery procedures. The administration of the overall plan should be guided by a section, which describes high-level contingency management procedures. Finally, any instructions needed to take advantage of internal and external contracts and provisions should be determined and documented in the plan.

Division managers should be heavily involved in this phase to ensure their ownership of the program once the implementation is complete. The continuity planner's role is often that of coordinator - helping direct the assembly of plans and arrangements according to the instructions provided by the strategy.

- *Negotiate Contracts and Provisions*: Most organizations' recovery strategies will depend on certain internal and external logistical arrangements as tools for recovery. If it is called for by the continuity strategy, work with recovery service vendors to develop and negotiate contractual arrangements, which will meet or exceed the agency's needs, both operationally and financially. It may also be necessary to facilitate and direct the implementation of internal operational changes to strengthen the agency's Business Continuity Program.

- *Document Contingency Management Plans*: The contingency management plans encompass all of the organization-level and administrative tasks necessary for recovery. Emergency response, disaster declaration, and plan administration, exercising, and maintenance procedures are typically included here.

- *Document Business Continuity Plans*: These business continuity plans are actually a compilation of the continuity plans for each business unit. Each unit should determine what procedures and information are required for degraded and full recovery, and document them in a manner, which is meaningful to personnel within that unit.

- *Document Infrastructure Continuity Plans*: Infrastructure services and resources (e.g.: information technology, telecommunications etc.) often require continuity plans which differ significantly from those of other business units. These plans are often a set of very detailed, step-by-step, recovery scripts which guide an employee (such as a computer operator) through the procedures necessary to recover the service, resource, or system.

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Objectives

Implementation of the selected continuity strategy will yield a complete Business Continuity Program: fully documented Business Continuity Plans, formalized contracts, and a readiness to maintain and exercise the program on a regular basis.

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Negotiate Contracts & Provisions

Purpose

An important step in implementing an agency's business continuity strategy is the negotiation and implementation of contracts and provisions. Most strategies call for formalized arrangements with external organizations; these arrangements must be made before the Business Continuity Program can be considered complete. Additionally, this step describes an approach to the implementation of any organizational changes called for in the strategy.

Objective

Negotiate any necessary contracts and arrangements with external organizations. Implement the contracts and ensure that the arrangements are viable and available for use in an outage.

Facilitate the introduction of any operational changes to the agency, which are called for by the strategy.

Approach

This step may be performed concurrently with other steps in the Strategy Implementation phase.

For each contracted service or purchase which is called for by the business continuity strategy, identify the specific requirements. Following standard procurement procedures, ensure that the service or purchase is appropriately budgeted and approved; collect bids from likely vendors and select one that most appropriately meets the agency's needs. Some services may require formalized agreements, but no monetary commitment. For example, some agreements with telephone service providers to automatically forward certain lines following an outage may be available at no cost, but the arrangement must still be made in advance of any outage. Additionally, reciprocal agreements with other State agencies should be formalized at this time.

Contracted services and purchases may involve some of the following strategies: (not all-inclusive)

- Establishing the availability of alternate work areas

- Arrangements with vendors for guaranteed supply following an outage

- Contracts with external recovery facilities and resource providers (e.g. hot site providers or processing bureaus)

- Contractual changes to existing agreements with service providers

- The purchase and storage of backup specialized equipment

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- New off-site storage procedures for critical data, equipment and records

- Transportation arrangements for items to be stored off-site

- New software and communications facilities for electronic data vaulting

- Arrangements with utility service providers

- Implementation of source document imaging capability

Beyond external purchases, contracts, and arrangements, many requirements of a business continuity strategy are internal. To accomplish these changes, it is most appropriate to act as a facilitator of their implementation. Working closely with the division manager(s) who will assume responsibility for these organizational changes, assist them in developing a workplan and securing the necessary support and resources to complete the task. Since the continuity strategy has by this time been approved by all relevant management, securing support and resources should be relatively straightforward.

Internal operational changes may include: (not all-inclusive)

- The development of internal alternate facilities and equipment

- New or modified operating procedures to increase continuity

- Review and modification of data backup and off-site storage procedures

- New or modified restoration procedures for off-site data

- Development of alternate procedures for use during a disaster

Once these arrangements have been made, clearly document the nature of the arrangement and any procedures necessary for maintenance and activation. These procedures will be important for inclusion in the plans, which are written in other steps of this phase.

Data Collection

Much of the key data needed for this step will have been collected during the previous phase of work. For the negotiation and implementation of contracts and provisions, you will need:

- Detailed requirements for each arrangement, which must be made. These requirements were documented in the Strategy Development phase.

- Standards, forms, and guidelines for standard procurement procedures, available from your agency's procurement group or the State Procurement Office.

- Information on likely vendors of any externally contracted or purchased goods or services. References to such vendors may be gathered from your agency's procurement group or from

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industry publications such as *Contingency Planning & Management*, *Disaster Recovery Journal*, *Disaster Resource Guide*, or others.

Resources

People: Division managers, procurement personnel, and vendors.

Decision Points

While strategic approval has occurred for each of these arrangements, line-item approval may not yet have been granted. As standard procurement procedures are carried out, normal decision points will apply regarding the selection of vendors to bid, definition of RFP's, and selection of vendors. Appropriate management should also approve final arrangements with external organizations, and implementation of organizational changes will require periodic approval as they are completed.

Deliverables

Contracts and other written agreements for goods and services.

Procedures for the maintenance and activation of all arrangements, for inclusion in the plans developed in the other steps of this phase.

Updated organizational information (procedures, org. charts, etc.) which reflect any organizational changes implemented.

A summary document, which describes all, contracts and provisions for management reference.

Considerations

As a start, it may be helpful to consider any vendors who were contacted during the Strategy Development phase for inclusion in bidding for services.

Document Contingency Management Plans

Purpose

The contingency management plans encompass all of the organization-level and administrative plan components that directly or indirectly support the activation of the recovery plan or help ensure the ongoing integrity and viability of the plan. Emergency response, disaster declaration, and plan administration, exercising, and maintenance procedures are typically included here.

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Objective

Clearly document all procedures necessary for emergency response, disaster declaration, and the administration, exercising, and maintenance of the Business Continuity Program.

Approach

First, identify the teams who will be responsible for implementation of the contingency management plans. All team members must have the training and the ability to perform these duties, and each member should have an alternate who is equally qualified. Contingency management plan implementation team members should include the individual or individuals that will be responsible for overseeing the activation of the continuity plans in an outage. This person must be empowered by management to make high-level decisions on behalf of the agency. It is preferable to designate one of the agency's top-level managers for this responsibility.

Each subset of procedures prescribed by the contingency management plans should be assigned an appropriately sized team, with a clearly identified, responsible, leader. For example, an emergency evacuation team may be led by a senior facilities manager. If your division's facility is relatively small, this team may only include a few individuals; if your division operates in many, large facilities, this team may need to include many personnel, organized into sub-teams by building and floor.

Representatives of each team should develop the procedures for each subset. As the procedures are developed, they should be organized into a logical order, and grouped, if necessary, by any specific scenarios to which they may pertain. For example, some emergency response procedures may apply in a major natural disaster, but not in a "routine" power outage.

To develop contingency management plans, it is first imperative to understand the scope of these plans. The scope will be determined based on the agency's priorities and size, and based on the level of detail addressed by the procedures developed for business and infrastructure continuity. These plans should be written at a level of detail, which will permit the designated continuity team to accurately implement them with little additional guidance in an outage situation. Contingency management plans may include:

- Business continuity policy
- Emergency response
- Emergency evacuation
- Damage impact assessment
- Disaster declaration and escalation
- Command center activation
- Personnel notification procedures

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- Resumption of normal operations

- Administration

  - Media management

  - Employee crisis management

  - Vendor communications management

  - Client communications management

  - Salvage operations

  - Travel coordination

  - Recovery expense control and reporting

- Plan exercise project management

- Plan maintenance management

These sections may be combined or expanded upon to appropriately address the continuity needs of a specific agency.

Data Collection

The following information sources should be considered in the development of contingency management plans:

- Position descriptions, activity instructions, or other existing internal documentation, which may describe similar procedures to those being developed.

- Sample procedures from State documents, as well as from industry publications such as *Contingency Planning & Management*, *Disaster Recovery Journal*, *Disaster Resource Guide*, or others.

Resources

As the contingency management teams are developed, the members of these teams may be relied upon to develop or review specific procedures.

Decision Points

As procedures are developed, it is important to conduct regular, iterative reviews between the continuity planner and the person or people who will be responsible for implementing the procedures.

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This type of review will help ensure that the procedures are appropriately comprehensive and understandable to permit ease of implementation.

Deliverables

A comprehensive set of contingency management plans for inclusion in the agency's overall Business Continuity Program.

Considerations

Disclose any assumptions made in developing the contingency management plans.

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Document Division Continuity Plans

Purpose

The business continuity plans are actually a compilation of the continuity plans for each business unit. Each unit should determine what procedures and information are required for degraded and full recovery, and document them in a manner, which is meaningful to personnel within that unit.

Objective

Clearly document all procedures and information necessary for degraded and full recovery of each unit.

Approach

Identify the teams who will be responsible for implementation of the division continuity plans. All team members must have the training and the ability to perform these duties, and each member should have an alternate who is equally qualified. Division continuity plans implementation team members may include:

- The individual or individuals that will be responsible for overseeing the activation of the continuity plans in an outage. The coordinator/planner is responsible for assessing damages and initiating the use of the plans in the event of an interruption. The coordinator/planner is also responsible, in conjunction with other key personnel, for creating exercising schedules and maintaining plan change control procedures.

- The individual or individuals who will be responsible for the execution and maintenance of his or her division's section of the plans. Unless noted otherwise, each unit recovery task is the responsibility of the team leader. An alternate, who will perform these duties in the absence of the team leader, supports each team leader. These "key personnel" are under the guidance of the coordinator/planner. Any significant changes to the plans should be reviewed by the coordinator/planner prior to implementation.

Team members are assigned to a division continuity team. The members act under the direction of the team leaders to execute the tasks necessary to recover division functions in the event of an interruption. The entire team for division may not include all personnel normally assigned to that unit.

Continuity plans are developed within the framework of the recovery strategy. The continuity teams are allocated responsibility for performing specific tasks during the recovery process to meet recovery objectives. Division continuity plans should include the following components:

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- Detailed procedures to re-establish business units following the loss of work area. This may involve procedures to establish an alternate site, including workstations, telephones, supplies and other office tools.

- Manual divisional procedures. Alternate procedures may be required in the event that infrastructure services are not available (e.g. computer systems or telephones), or until recovered operations can be established. Detailed procedures are required to ensure that business units continue at an acceptable level until these services can be restored. Alternate procedures may involve significant change from the normal methods of operations and will need detailed instructions to ensure staff is able to carry them out. From a data center perspective, manual procedures must ensure that all required data is captured until infrastructure services are recovered.

- Information re-creation procedures. Procedures to re-create or re-capture information that may be lost during a disaster (records, recent transactions, work in progress).

- Synchronization. Once infrastructure services are available, data re-created and manually processed during the outage will need to be synchronized. Synchronization involves integrity verification, database and application balancing.

- User fallback procedures. Address the interaction between technology and user areas focusing on the timing of end user access to automated information systems. This process supports a controlled, logical access to a constricted technology environment.

- Appendices should be included or updated as required.

- Team definition including responsibilities and time line oriented task definitions.

These components may be combined or expanded upon to appropriately address the continuity needs of a specific division.

Data Collection

The following information sources should be considered in the development of business continuity plans:

- Position descriptions, activity instructions, or other existing internal documentation, which may describe similar procedures to those being developed.

- Sample procedures from State documents, as well as from industry publications such as Contingency Planning & Management, Disaster Recovery Journal, Disaster Resource Guide, or others.

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Resources

People: As the business continuity planning teams are developed, the members of these teams may be relied upon to develop or review specific procedures.

Decision Points

As procedures are developed, it is important to conduct regular, iterative reviews between the continuity planner and the person or people who will be responsible for implementing the procedures. This type of review will help ensure that the procedures are appropriately comprehensive and understandable to permit ease of implementation.

Deliverables

A comprehensive set of division continuity plans for inclusion in the agency's overall Business Continuity Program.

Considerations

- Administrative support

- Front-line operations

- Physical security

- Facilities and supplies

- Transportation support

- Customer liaison

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Document Infrastructure Continuity Plans

Purpose

Infrastructure services and resources (e.g.: information technology, telecommunications, facility, etc.) often require continuity plans which differ significantly from those of other business units. These plans should be a set of very detailed, step-by-step, recovery scripts which guide an employee (such as a computer operator) through the procedures necessary to recover the service, resource, or system.

Objective

Clearly document all technical and operational procedures in a detailed, step-by-step manner necessary to recover the service, resource, or system.

Approach

Identify the teams who will be responsible for implementation of the infrastructure continuity plans. All team members must have the training and the ability to perform these duties, and each member should have an alternate who is equally qualified. Infrastructure continuity plans implementation team members may include:

- The individual or individuals that will be responsible for overseeing the activation of the infrastructure continuity plans in an outage. The coordinator/planner is responsible for assessing damages and initiating the use of the Plans in the event of an interruption. The coordinator/planner is also responsible, in conjunction with other key personnel, for creating exercising schedules and maintaining plan change control procedures.

- The individual or individuals who will be responsible the execution and maintenance of his or her infrastructure service section of the plans. Unless noted otherwise, each infrastructure service area task is the responsibility of the team leader. An alternate, who will perform these duties in the absence of the team leader, supports each team leader. These "key personnel" are under the guidance of the coordinator/planner. Any significant changes to the plans should be reviewed by the coordinator/planner prior to implementation.

Team members are assigned to an infrastructure continuity team. The members act under the direction of the team leaders to execute the tasks necessary to recover division functions in the event of an interruption. The entire team for the service or resource may not include all personnel normally assigned to that service or resource.

State of Arizona
Department of Administration
Business Continuity Planning Guidelines

Phase I: Business Impact Assessment	Phase II: Strategy Development	Phase III: Strategy Implementation
Business Analysis	Resource Requirements	Contracts and Provisions
Operational Impact Analysis	Recovery Alternatives	Contingency Management
Financial Impact Analysis	Strategy Recommendation	Business Unit Continuity
		Infrastructure Continuity

Infrastructure continuity plans should be developed within the overall recovery strategy. The continuity teams are allocated responsibility for performing specific tasks during the recovery process to meet these recovery objectives. The recovery plan will include:

- Establishing recovery team structure and responsibilities

- Developing detailed continuity plans for each service area, detailing the step-by-step actions required to recover the service, resource, or system

- Assembling any additional documentation that may be required during recovery

Data Collection

The following information sources should be considered in the development of Infrastructure continuity plans:

- Day-to-day operating procedures, system manuals, or other existing internal documentation which may describe similar procedures to those being developed. Where possible, procedures should use normal operational documentation and highlight any differences in a recovery situation.

- Sample procedures from State documents, as well as from industry publications such as Contingency Planning & Management, Disaster Recovery Journal, Disaster Resource Guide, or others.

Resources

As the infrastructure continuity planning teams are developed, the members of these teams may be relied upon to develop or review specific procedures.

Decision Points

As procedures are developed, it is important to conduct regular, iterative reviews between the continuity planner and the person or people who will be responsible for implementing the procedures. This type of review will help ensure that the procedures are appropriately comprehensive and understandable to permit ease of implementation.

Deliverables

A comprehensive set of infrastructure continuity plans for inclusion in the agency's overall Business Continuity Program.

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Considerations

The recovery teams required will vary depending on the organization, its size, and its internal structure.

- Information Technology Team

  - Computer operations (centralized and decentralized)

  - Data control and distribution

  - Applications support

  - Technical support

  - Computer hardware

- Telecommunications Team

  - Data communications (e.g. WAN and LAN)

  - Voice communications

- For some organizations the tasks of these teams may be combined into a small number of teams and people. Individuals may also be members of several teams and have multiple responsibilities. Teams should be organized so that there is no reliance on any one person. Every key person (e.g. team leaders) should have at least one alternate.

GLOSSARY

Agency

Any state agency, board, commission or political subdivision.

Agency Sensitivity to Disruption

The point at which the ADOA requires that its operations be returned to serve their customers..

Alternate Site

A location, other than the normal facility, which can be used to conduct core processes.

Business Continuity

The ability to continue essential business processes at an acceptable level despite a support function outage.

Business Continuity Planning

Providing for the timely availability of all of the resources necessary to operate critical business processes at a level acceptable to the public.

Business Function/Area/Unit

A definitive function within the business process; may equate to departmental structure. Does not imply complete independence from other functions within a process.

Business Impact Assessment

To determine the operational (qualitative) and financial (quantitative) impact of an inoperable or inaccessible service area on an agency's ability to conduct its critical business processes; provides the basis for formulating the ADOA's business recovery strategies and a business continuity program.

Business Process

A set of recurring activities - a flow of information and materials that produce something of value for a customer or the public.

Cold/Shell site

Information systems recovery facilities that are only fully equipped at the time of the disruption but do provide very basic infrastructure such as lights, heat and space. These sites can be housed internally at ADOA facilities, vendor provided facilities, or mobile trailers.

Contingency Plan	A written plan used to respond to the disruption ADOA's operations. This plan may focus on response to specific disruption scenarios.
Controls	Measures designed to reduce or mitigate the risk of exposures to threats.
Critical Business Processes [Core Processes}	Business processes on which the viability of a division rests; without these processes, a division could not do business.
Declaration Fee	A one-time charge, which is paid to the provider of an alternative site facility or service at the time a disaster, is officially declared.
Director	The chief executive officer for a State agency, board or commission.
Disaster	An event which leads to disruption of critical business processes; implies unrecoverability, irreparable damage, or a disruption which lasts for and unacceptable period of time.
Disruption	An unplanned interruption of critical business processes.
Emergency Operations Center (EOC)	The facility utilized in the event of a disruption to coordinate ADOA's response and recovery activity.
Emergency Response Procedures	The procedures used by the ADOA to immediately respond to an emergency disruption.
Emergency Response Team (ERT)	A group of personnel with the responsibility to immediately respond to an emergency.
Estimated Recovery Time (ERT)	The amount of time from the point of the disruption to the recovery of key resources/services.
Executive Sponsor	The designated individual who provides guidance to the ADOA/division business continuity program development and adjudicates all issues emanating from the Executive Steering Committee. This individual is typically the Director/Division AD.

Executive Steering Committee	The ADOA's upper management personnel who provide oversight and direction to the Business Continuity Task Team for the development of ADOA Business Continuity Program.
Facilities Management Team (FMT)	The agency, ADOA's personnel responsible for maintenance of the facilities. In the recovery efforts this team may be expanded to include personnel with a detailed knowledge of work area recovery issues that should be incorporated into relocation considerations.
Financial Impact	The quantifiable dollar value of lost revenue or additional expenses incurred as a result of a disruption.
Hot/Warm site	Information systems recovery facilities that are either fully or partially equipped prior to a disruption. These sites can be housed internally at ADOA facilities, at vendor provided facilities, or in mobile trailers.
Impact Tolerance	Another way of describing the MAO and RTO. This assessment discusses interruption in terms of how long the ADOA can tolerate an interruption in critical business processes due to an unplanned interruption.
Informal Contingencies	Informal but potentially viable fallback procedures existing within business areas/units to address operational mishaps and localized equipment malfunctions.
Inventories	A list of all resources and components of those resources necessary both at a degraded level and to recover the agency, board or commission 100%. e.g. furniture, equipment, computer hardware and software.
Liability	A likely negative effect resulting from the loss of utility, access and/or facility.

Maximum Acceptable Outage (MAO)	The maximum period of time that a given resource of function can be unavailable before the ADOA will sustain unacceptable consequences (financial losses, client/public services, etc.).
Maximum Probable Loss (MPL)	Calculation of estimated financial loss, which may be incurred by the ADOA in the event of an outage. MPL takes into consideration revenue/cost, losses incurred associated with property and equipment, the application of business interruption and property insurance, costs incurred by the private sector and mitigating expenses.
Mitigating Expenses	Cost of contingency plans or arrangements in place that would potentially offset the extent of losses or exposure over a period of time.
Notification List	A list of personnel, staff members, media, private sector groups and organizations, vendors, insurance and other key persons to inform in the event of a disruption. It is often designed so that the most critical individuals are contacted first, to assist with recovery efforts.
Operational Impact	The qualitative effect on an agency, board or commission's ability to conduct business as a result of a disruption.
Outage Timeframes	The duration of time over which a disruption occurs, affecting both the impact of the disruption and the alternatives used for recovery.
Plan Administrator	Individual or group within the agency, board or commission with specific responsibility for the maintenance and testing of the Business Continuity Program. The "*owner*" of the plan.
Plan/Program Exercise	An integral part of a Business Continuity Program is development of exercises to familiarize personnel with recovery procedures and identify opportunities to improve the plan.
Public Relations Team	The agency, board or commission's personnel or representatives responsible for responding to the press and managing the public's expectations in the event of a

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	disruption.
Recovery	Returning an business unit's operations to an acceptable level .
Recovery Alternatives	The options from which an agency, board or commission may select to respond to a disruption. Alternatives may include alternate facilities, outsourcing to vendors, elimination of core processes, manual procedures, etc.
Recovery Point Objective (RPO)	The point in time to which data must be restored in order to resume processing transactions.
Recovery Strategy	The set of selected recovery alternatives, which define the manner in which an agency, board or commission intends to respond to and recover from a disruption.
Recovery Time Objective (RTO)	The target time frame for restoration of critical business processes and service areas.
Resource Requirements	Major resource(s) supporting ADOA's business processes; equipment, information systems, data communications, voice communications, office facilities, staff, etc.
Restoration	Returning to 100% of operational capacity, as it existed prior to the disruption.
Revenue Impact	The direct impact an outage may have upon the primary revenue streams of ADOA.
Risk	The potential for exposure to loss. Risks, either man-made or natural, are constant throughout our daily lives. The potential is usually measured by its probability in years.
Scenario	Hypothetical situation, which may occur as a result of an outage caused by, or associated with, potential threats and/or vulnerabilities identified.
Script	A prepared list of responses to answer questions and phone calls in the event of a disruption. These can be generic or specific to the type of disruption.

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Service Expectations	The service level required to meet the expectations of the public, e.g. quality, timely deliveries, customer service etc.
Single Point of Failure	A critical function, support service, or other key resource which cannot be effectively redirected or recovered elsewhere in the agency.
Statement of Assumptions	Management's agreed upon impact scenario from which the scope of the planning process is performed. Assumptions may include the type of disaster, the areas affected, the time of day or year, and so on. The assumption reflects management's risk tolerance for scoping the planning effort and selection of alternatives.
Structured Walk-Through Exercise	A simulation method used to exercise or "*test*" a completed disaster recovery plan. Team members meet to verbally walk through each step of the plan to confirm the effectiveness of the plan and identify gaps, bottlenecks, or other opportunities for improvement.
Threat	External in nature; agency, board or commission would have minimal if any control in preventing occurrence, however, protective measures may be implemented to minimize impact of an occurrence.
Triggers	Change management processes and procedures, which cause updates and changes to be made to the Business Continuity Program.
Vulnerability	Weakness in the design or application of control within a process, function, or facility which may promote or contribute to a disruption.